Please cancel claims 1-20 without prejudice or disclaimer.

Please add the following new claims 21-44.

For the Examiner's convenience, all pending claims are listed below. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

21. (New) An isolated polypeptide selected from the group consisting of:

a) a polypeptide comprising an amino acid sequence of SEQ ID NO:12,

b) a polypeptide comprising a naturally occurring amino acid sequence at least 90% identical to an amino acid sequence of SEQ ID NO:12,

c) a biologically active fragment of a polypeptide having an amino acid sequence of SEQ ID NO:12, and

d) an immunogenic fragment of a polypeptide consisting of an amino acid sequence of SEQ ID NO:12, wherein said fragment comprises at least 25 contiguous amino acid residues of SEQ ID NO:12.

22. (New) An isolated polypeptide of claim 21 comprising an amino acid sequence of SEQ ID NO:12.

23. (New) An isolated polynucleotide encoding a polypeptide of claim 21.

24. (New) An isolated polynucleotide encoding a polypeptide of claim 22.

25. (New) An isolated polynucleotide of claim 24 comprising a polynucleotide sequence of SEQ ID NO:31.

26. (New) A recombinant polynucleotide comprising a promoter sequence operably linked to a polynucleotide of claim 23.

27. (New) A cell transformed with a recombinant polynucleotide of claim 26.

28. (New) A method of producing a polypeptide of claim 21, the method comprising:

a) culturing a cell under conditions suitable for expression of the polypeptide, wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide encoding the polypeptide of claim 21, and

b) recovering the polypeptide so expressed.

29. (New) A method of claim 28, wherein the polypeptide comprises an amino acid sequence of SEQ ID NO:12.

30. (New) An isolated polynucleotide selected from the group consisting of:

a) a polynucleotide comprising a polynucleotide sequence of SEQ ID NO:31,

b) a polynucleotide comprising a naturally occurring polynucleotide sequence at least 90% identical to a polynucleotide sequence of SEQ ID NO:31,

c) a polynucleotide complementary to a polynucleotide of a),

d) a polynucleotide complementary to a polynucleotide of b), and

e) an RNA equivalent of a)-d).

31. (New) A method of detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 30, the method comprising:

a) hybridizing the sample with a probe comprising at least 20 contiguous nucleotides comprising a sequence complementary to said target polynucleotide in the sample, and which probe specifically hybridizes to said target polynucleotide, under conditions whereby a hybridization complex is formed between said probe and said target polynucleotide or fragments thereof, and

b) detecting the presence or absence of said hybridization complex, and, optionally, if present, the amount thereof.

32. (New) A method of claim 31, wherein the probe comprises at least 60 contiguous nucleotides.

33. (New) A method of detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 30, the method comprising:

a) amplifying said target polynucleotide or fragment thereof using polymerase chain reaction amplification, and

b) detecting the presence or absence of said amplified target polynucleotide or fragment thereof, and, optionally, if present, the amount thereof.

34. (New) A composition comprising a polypeptide of claim 21 and a pharmaceutically acceptable excipient.

35. (New) A composition of claim 34, wherein the polypeptide comprises an amino acid sequence of SEQ ID NO:12.

36. (New) A method for treating a disease or condition associated with decreased expression of functional PROAP, comprising administering to a patient in need of such treatment the composition of claim 34.

37. (New) A method of screening for a compound that specifically binds to the polypeptide of claim 21, the method comprising:

a) combining the polypeptide of claim 21 with at least one test compound under suitable conditions, and

b) detecting binding of the polypeptide of claim 21 to the test compound, thereby identifying a compound that specifically binds to the polypeptide of claim 21.

38. (New) A method of screening a compound for effectiveness in altering expression of a target polynucleotide, wherein said target polynucleotide comprises a sequence of claim 25, the method comprising:

a) exposing a sample comprising the target polynucleotide to a compound, under conditions suitable for the expression of the target polynucleotide,

b) detecting altered expression of the target polynucleotide, and

c) comparing the expression of the target polynucleotide in the presence of varying amounts of the compound and in the absence of the compound.

39. (New) A method of assessing toxicity of a test compound, the method comprising:

a) treating a biological sample containing nucleic acids with the test compound,

b) hybridizing the nucleic acids of the treated biological sample with a probe comprising at least 20 contiguous nucleotides of a polynucleotide of claim 30 under conditions whereby a specific hybridization complex is formed between said probe and a target polynucleotide in the biological sample, said target polynucleotide comprising a polynucleotide sequence of a polynucleotide of claim 30 or fragment thereof,

c) quantifying the amount of hybridization complex, and

d) comparing the amount of hybridization complex in the treated biological sample with the amount of hybridization complex in an untreated biological sample, wherein a difference in the amount of hybridization complex in the treated biological sample is indicative of toxicity of the test compound.

40. (New) A microarray wherein at least one element of the microarray is a polynucleotide of claim 23.

41. (New) A method of generating an expression profile of a sample which contains polynucleotides, the method comprising:

a) labeling the polynucleotides of the sample,

b) contacting the elements of the microarray of claim 40 with the labeled polynucleotides of the sample under conditions suitable for the formation of a hybridization complex, and

c) quantifying the expression of the polynucleotides in the sample.

42. (New) An isolated antibody which specifically binds to a polypeptide of claim 21.

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43. (New) The antibody of claim 42, wherein the antibody is:

a) a chimeric antibody,

b) a single chain antibody,

c) a Fab fragment,

d) a $F(ab')_2$ fragment, or

e) a humanized antibody.

44. (New) A composition comprising an antibody of claim 42 and an acceptable excipient.